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Validation of *Kwoniella heveanensis*, teleomorph of the basidiomycetous yeast *Cryptococcus heveanensis*SHENG SUN¹, BANU METIN^{1, A}, KEISHA FINDLEY^{1, B},
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ABSTRACT— *Kwoniella heveanensis*, recently published in an electronic journal and without a designated holotype, is validated as the name of the newly discovered teleomorph of *Cryptococcus heveanensis*.

KEYWORDS— Tremellales, mating, ex-type culture

Introduction

Cryptococcus heveanensis (Groen.) Baptist & Kurtzman is a basidiomycetous fungus closely related to the human pathogenic fungus *Cryptococcus neoformans* (Baptist & Kurtzman 1976, Findley et al. 2009, Metin et al. 2010). The sexual life cycle of this species was recently discovered and the teleomorph named as *Kwoniella heveanensis* (Metin et al. 2010). However, this name was invalid, because no holotype was designated (McNeill et al. 2006: Art. 37), and the publication was in an electronic-only journal (McNeill et al. 2006: Art. 29).

We here fulfill the requirements for valid publication of *Kwoniella heveanensis*.

Kwoniella heveanensis Metin, K. Findley & Heitman, sp. nov.

FIG. 1

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“Species heterothallica. Hyphae dikaryoticae, fibulae fusae. Basidia aggregata, primum submersa, deinde superficialia, globosa, 7.5–10.5 μm diam, septis cruciatis divisa,

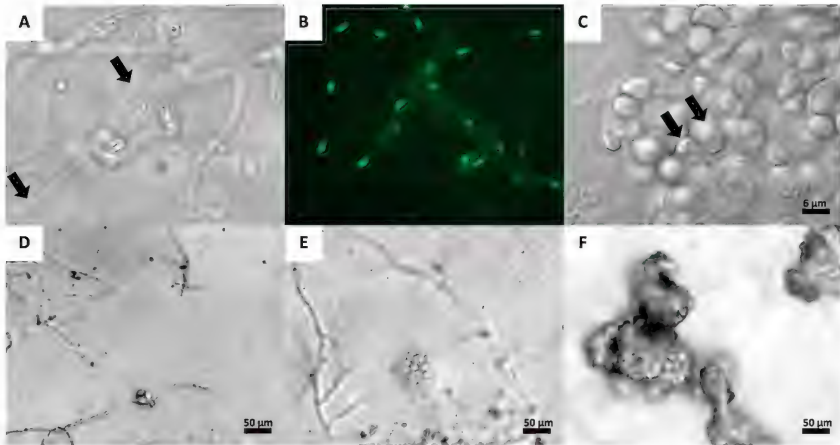


FIG. 1 Different stages of the sexual cycle of *Kwonilella heveanensis*. A, differential interference contrast (DIC) image showing hyphae with fused clamp connections (CC, indicated by black arrows); B, fluorescence image of the same field as in A, stained with Sytox green, showing the dikaryotic hyphae; C, globose basidia with cruciate septa (indicated by black arrows); D–F, DIC images of basidial clusters: D, the early stage (~2 weeks) at which basidial clusters are embedded in the agar; E, a young basidial cluster (~3 weeks) embedded in the agar; F, mature basidial clusters (~4 weeks) on the surface of the agar.

sterigmatibus carentia. Basidiosporae subglobosae, 2.3–3.3 μm diam, cito conidia proferentia.” (Metin et al. 2010: 15).

HOLOTYPE: Sexual product of mating between *Cryptococcus heveanensis* strains CBS 569 and BCC 8398, preserved as a permanent slide (BPI 881007).

“Heterothallic fungus. Hyphae dikaryotic, clamp connections fused. Basidia clustered, submerged initially, finally on aerial hyphae, globose, 7.5–10.5 μm , cruciately septate, sterigmata not observed. Basidiospores subglobose, 2.3–3.3 μm , germinating by conidia.” (Metin et al. 2010: 15).

COMMENTS— Strains CBS 569 and BCC 8398 (also deposited in CBS as CBS 12232) should be designated as the ex-type strain and the isotype strain, respectively, for the teleomorph.

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